



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

**In re Application of:**

**Inventor:** Albert MODL et al

**Application No.:** 10/030,163

**Confirmation No:** 4360

**Customer No.:** 23364

**Filed:** April 25, 2002

**Atty. Docket No.:** MODL3002/JEK/JJC

**Examiner:** Daniel ST. CYR

**Art Unit:** 2876

**For:** METHOD, DEVICE AND SYSTEM FOR BIOMETRICALLY  
AUTHENTICATING A PERSON

**APPLICANTS' APPEAL BRIEF PURSUANT TO 37 CFR §§ 1.191 and 1.192**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This appeal brief is filed pursuant to the applicants' appeal to the Board of Patent Appeals and Interferences from the rejection of claims 1-18 in the above-application.

**1. REAL PARTY OF INTEREST**

The real party in interest is the assignee of record: Giesecke & Devrient GmbH (Munich, GERMANY).

**2. RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

### **3. STATUS OF CLAIMS**

Claims 1-18 are currently pending in the above-referenced application.

Applicants appeal from the rejection of only claims 1, 10 and 13. These claims have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,719,950 ("Osten"). A copy of appealed claims 1, 10 and 13 are included in the attached Appendix I. A copy of the Osten patent is included in the attached Appendix II, and a copy of the rejection dated February 23, 2004 is attached as Appendix III.

### **4. STATUS OF AMENDMENTS**

An amendment of the pending claims in the present application was filed concurrently herewith. In the amendment, claims 3, 5, 14 and 16-18 are canceled, and new claims 19-24 are submitted which recite the allowable subject matter of claims 3, 5, 14 and 16-18, respectively, combined with corresponding base claims and intervening claims.

### **5. SUMMARY OF THE INVENTION**

A problem to be solved by the present invention is to improve the authentication of individual biometric features of a person through the use of a quality parameter. The quality parameter is unique to a specific biometric feature and is used to assure the quality of detected biometric features. The parameter is based on at least one property of a person that specifically influences sensory detection of a biometric feature of a person (page 2, first paragraph).

Skin moisture may be a suitable quality parameter when a fingerprint is used as the measured biometric feature. If the person has skin which is neither considered dry nor moist, the parameter for the individual feature quality is fixed at 100 percent of a standard value. Moreover, if the person's skin is considered moist or dry, the parameter is either set above or under 100 percent of a standard value. The increase or reduction in the individual parameter as an absolute deviation from the standard value can be used as a basis in lowering or raising the standard

threshold value (page 2, first paragraph through second paragraph; page 3, first full paragraph).

Thus, according to one use, an acceptable threshold range may be modified according to the parameter, and such range may be used to authenticate a person. Indeed, modification of the threshold value and the establishment of a suitable threshold range impedes imitation of the biometric feature (page 2, second paragraph).

In another use, the parameter may be used as a basis to adjust a measuring instrument accordingly for redetecting the biometric feature in authenticating the person. Thus, the specific parameter or parameters of the individual may be taken into account in a redetection of the person's biometric feature. Moreover, the redetected biometric feature's result can be compared to match with reference data used to authenticate the person (page 2, third full paragraph).

Therefore, in accordance with the invention, separate and unique parameters may be obtained that specifically influence a person's biometric feature in that the parameters are individually used to adjust a sensor system of a measuring instrument or to modify a threshold level related to the person's measured biometric feature (page 2, fourth full paragraph).

## **6. SUMMARY OF THE APPEALED CLAIMS**

### **A. Claim 1**

Claim 1 is an independent claim that recites a method for biometric authentication of a person. The method includes the step of detecting biometric data of a person and storing the detected biometric data as reference data. At least one parameter is determined that is based on at least one individual property of the person that specifically influences sensory detection of said biometric data. The at least one parameter is stored and taken into account in at least one of the following method steps of: redetecting the person's biometric data, comparing the redetected biometric data for a match with the reference data, and authenticating the person if the match reaches a degree above a defined threshold value.

B. Claim 10

Claim 10 is an independent claim that recites an apparatus comprising a first memory area with a person's biometric data as reference data, and a second memory area with a parameter based on at least one individual property of the person that specifically influences the sensory detection of the biometric data.

C. Claim 13

Claim 13 is an independent claim that recites a system including a first memory area with a person's biometric data serving as reference data, and a second memory area with a parameter based on at least one individual property of the person that specifically influences the sensory detection of the biometric data. The system further includes a first device for detecting a person's biometric data, and a second device for comparing the reference data stored in the first memory area of the apparatus for a match with the person's detected biometric data. The second device authenticates the person if the match reaches a degree above a defined threshold value. At least one of the first and second devices is coupled with the parameter stored in the second memory area of the apparatus.

7. **ISSUE**

Whether anticipation within the meaning of 35 U.S.C. § 102(b) of the subject matter in claims 1, 10 and 13 by the Osten patent is established when the Osten patent neither discloses nor suggests critical limitations or steps in claims 1, 10 and 13 embodied by the claimed invention?

8. **GROUPING OF CLAIMS**

Claim 1 will stand or fall by itself.

Claim 10 will stand or fall by itself.

Claim 13 will stand or fall by itself.

9. **ARGUMENT**

A. The Rejection

Claims 1, 10 and 13 in this application were finally rejected under 35 U.S.C. § 102(b) as being anticipated by the Osten patent.

B. Pertinent Law

To establish anticipation under 35 U.S.C. § 102(b), “a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Vergegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). There is no anticipation “unless all of the same elements are found in exactly the same situation and united in the same way ... in a single prior art reference.” *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 894, 221 USPQ 669, 673 (Fed. Cir. 1984) (citing *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 771, 218 USPQ 781, 789 (Fed. Cir. 1983). Absence from the reference of any claimed element negates anticipation. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1571, 230 USPQ 81, 84 (Fed.Cir.1986).

C. The Osten Patent Fails To Disclose Or Suggest A Method, Apparatus Or System Utilizing A Parameter That Specifically Influences Sensory Detection Of Biometric Data

The Osten patent generally relates to a system that employs specific biometric data and at least one “non-specific” biometric parameter in separate and unrelated tests to authenticate an individual person (col. 3, lines 28-53).

Significantly, the teachings of the Osten patent fail to disclose or suggest establishing or using a “parameter” that “specifically” influences the sensory detection of the biometric data used to authenticate the individual. Indeed, while the specific biometric data is unique to the individual person being authenticated, the non-specific biometric parameters are merely used to determine if the obtained information relates to “acceptable norms” (col. 3, lines 56-59; col. 4, lines 14-22), and whether the individual is not “incapacitated, dismembered, or deceased” (col. 6, lines 9-13).

Contrary to the methods and embodiments recited in claims 1, 10 and 13 of the present application, there is simply no disclosure of a secondary test that specifically confirms the validity of the specific biometric data in the Osten patent. According to the Osten patent, the physiological norms of the non-specific biometric parameters include characteristics such as bone structure, physical dimensions, skin temperature, electrocardiographic signals, pulse and spectral characteristics of human tissue (col. 3, lines 1-13, lines 61-67). These non-specific biometric parameters are clearly described as being “not unique” to the individual (col. 2, lines 66-67). This non-specific information is only used to determine if the obtained data falls within acceptable norms (col. 3, lines 56-59; col. 4, lines 14-22).

Unlike the teachings of the Osten patent, claims 1, 10 and 13 recite that the at least one individual property upon which the “parameter” is based directly relates to an individual property of the person. It follows that this parameter is not a random value indistinguishable from person to person, as is the non-specific biometric parameter in the Osten patent. Instead, in the method and embodiments of the present application, the parameter is in reference to the person’s “individual” properties and is therefore “unique” to the person (page 2, first paragraph in the specification of the present application).

Since the Osten patent fails to disclose or suggest using a “parameter” based on a person’s individual properties that specifically influences the sensory detection of specific biometric data of related to the person, the Osten patent cannot possibly be construed to disclose or suggest the pertinent limitations of claims 1, 10 and 13 of the present application.

Keeping in mind the basis of the “parameters” in the claims of the present application, it will be pointed out that the individual parameters are stored and subsequently used to redetect biometric data, compare the redetected biometric data for a match with reference data or authenticate a person if the match reaches a degree above a defined threshold value. In view of the Osten patent, there is clearly no disclosure or suggestion in the teachings in the Osten patent of storing at least one parameter that specifically influences specific biometric data based on an individual property of the person being tested that will be taken into account in a

subsequent process in confirming the authenticity of such specific biometric data. This assertion is further supported by the fact, as discussed above, that the non-specific biometric parameters in the Osten patent are not related to any particular individual.

As clearly illustrated in FIG. 7 of the Osten patent, the authentication processes involving specific biometric information and non-specific biometric information are parallel processes that are conducted separately and concurrently (col. 10, lines 12-15). Neither process depends upon the other, and the authentication process may be terminated if only one of the processes yields an unacceptable comparison (col. 10, lines 38-49). Authentication is performed only when both processes are complete and there are acceptable comparisons between the measured information and stored information.

In a contradistinction, the process of authenticating a person in accordance with the method of claim 1, the apparatus of claim 10, and the system of claim 13 of the present application do not rely on two separate authentication processes. Instead, the at least one parameter is dependent or specifically related to biometric data, and modification or adjustment due to the at least one parameter is taken into account in determining the authenticity of such biometric data.

It is simply illogical to construe non-specific biometric information as the equivalent of at least one parameter based on an individual property of a person that specifically influences sensory detection of specific biometric data.

When properly interpreted, the Osten patent requires two separate and parallel recognition and comparison subsystem processes using specific and non-specific biometric information. The Osten patent does not discuss or show such a parameter that “specifically” influences the sensory detection of the biometric data, but instead describes parallel recognition and comparison subsystems used for specific biometric recognition and non-specific biometric recognition. Although the Osten patent does describe authenticating a person using biometric information, it does not disclose or suggest using at least one parameter based on at least one individual property that specifically influences sensory detection of such biometric

data. Thus, even an artisan of ordinary skill must guess about how exactly in a separate yet parallel subsystem a determination of non-specific biometric information would substitute for the at least one parameter based on at least one individual property recited in the claims of the present application.

If the claims of the present application were properly interpreted, it is readily apparent that the separate subsystem for authenticating the specific biometric data in the Osten patent would require determining at least one parameter in order to anticipate the claims of the present application. About the most that can be said for the Osten patent is that the subsystem for authenticating the specific biometric data is not explicitly described as being inconsistent with the method, apparatus and system of the present application. However, this negative pregnant is not enough to show anticipation. See *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1997) (in order to anticipate, "the [prior art] reference must describe the applicant's claimed invention sufficiently to have placed a person of ordinary skill in the field of the invention in possession of it").

It is therefore submitted that the Osten patent does not disclose or suggest each and every element recited in claims 1, 10 and 13 of the present application. Moreover, the Osten patent fails to describe elements that are found in exactly the same situation and united in the same way as recited in the methods and embodiments of the present application. Accordingly, claims 1, 10 and 13 are not anticipated by the teachings of the Osten patent.



**10. CONCLUSION**

For the reasons set forth above, appended claims 1, 10 and 13 define subject matter which is not anticipated within the meaning of 35 U.S.C. § 102(b) by the Osten patent.

The fee required by 37 C.F.R. § 1.17(c) is enclosed herewith.

In accordance with 37 C.F.R. § 1.192(a), this brief is submitted in triplicate.

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Date: July 19, 2004

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Justin J. Cassell", written in a cursive style.

JUSTIN J. CASSELL  
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U.S. Patent Application No.: Albert MODL et al.  
Attorney No.: MODL3002/JEK/JJC

## APPENDIX I

Claim 1. (Previously Presented) A method for biometric authentication of a person, comprising the steps of

detecting biometric data of a person and storing the detected biometric data as reference data,

determining at least one parameter based on at least one individual property of the person that specifically influences sensory detection of said biometric data, and storing the determined parameter to be taken into account in at least one of the following method steps,

redetecting the person's biometric data,

comparing the redetected biometric data for a match with the reference data, and

authenticating the person if the match reaches a degree above a defined threshold value.

Claim 10. (Previously Presented) An apparatus comprising a first memory area with a person's biometric data as reference data and a second memory area with a parameter based on at least one individual property of the person that specifically influences the sensory detection of said biometric data.

Claim 13. (Previously Presented) A system comprising  
an apparatus having a first memory area with a person's biometric data as reference data and a second memory area with a parameter based on at least one individual property of the person that specifically influences the sensory detection of said biometric data,

a first device for detecting a person's biometric data, and

a second device for comparing the reference data stored in the first memory area of the apparatus for a match with the person's detected biometric data and authenticating the person if the match reaches a degree above a defined threshold value, at least one of the devices being coupled with the parameter stored in the second memory area of the apparatus.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,163	04/25/2002	Albert Modl	MODL3002/JEK	4360

23364 7590 02/23/2004

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EXAMINER

ST CYR, DANIEL

ART UNIT

PAPER NUMBER

2876

Date 2-25-04 Atty JEK/JTC  
Action Due Resp  
Deadline 5-23-04  
Final Deadline 8-23-04  
Based on \_\_\_\_\_

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.





## Office Action Summary

### Application No.

10/030,163

### Applicant(s)

MODL ET AL.

### Examiner

Daniel St.Cyr

### Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 3,5,14 and 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/12/03 has been entered.

### *Claim Objections*

2. Claims 8 and 9 are objected to because of the following informalities:

Claim 8, lines 2 and 3, "the" before "additional" should be changed to --an-- and before "environmental" should be deleted.

Claim 9, line 3 "the" before "sensor" should be changed to --a--.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 6-13, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Osten et al, US Patent No. 5,719,950.

Olsen et al disclose a biometric personal authentication system comprising: a fingerprint image sensor 10 inputting data for analysis to computer logic and memory functions 4 for unique, inherently specific identification, and non-specific biometric sensors 24, 26, and 28

with signal process functions 30 inputting information for analysis to computer system 6 to recognize electrocardiogram (EKG), pulse, and blood oxygen saturation for nonspecific biometric validation and skin temperature for further optional validation; a fingerprint recognition camera 10; a detector window 42, the detected image is captured and analyzed by image processor 12, developed into a vector array of fingerprint minutiae which is validated by comparator 14 through correlation of the scanned image vector array with the array selected from pre-stored memory file 16. (see figures 1, 7, and col. 6+).

***Allowable Subject Matter***

5. Claims 3, 5, 14, and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: Although the prior art of record teaches a system for authenticating users which includes storing biometric data of users and additional data specific of the users influencing sensory detection, comparing the stored information with information obtained during authentication to match a specific threshold range, the prior art of record fails to disclose or fairly suggest all the details of the system including defining the threshold is determined based on the determined specific information of the user that influences the sensory detection, the system contains an cavity filter which is variable depending on the determined information, etc. These limitations in conjunction with other limitation in the claims were not shown by the prior art of record.

***Additional remarks***

7. With respect to the applicant's argument that Osten et al fails to disclose using parameter that influences the sensory detection of the biometric data used to authenticate the individual, the examiner respectfully disagrees. Osten et al teach measures the skin temperature of the user, which inherently influences the sensory detection of the biometric data used to authenticate the individual (see figure 7). The skin temperature is directly related to the person and their biometric data being authentication. Both set of data are used to authenticate the user, so the specific information (determined parameter) is taken into account in redetecting and/or authenticating the user.

#### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee et al, US Patent No. 5,982,914, disclose an identification of individuals from association of finger probes and macrofeatures. Cumbers, US Patent No. 6,554,705, discloses a passive biometric customer identification and tracking system.

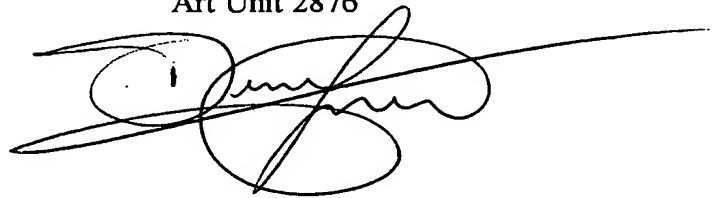
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel St.Cyr whose telephone number is 571-272-2407. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2876

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel St.Cyr  
Primary Examiner  
Art Unit 2876

A handwritten signature in black ink, appearing to read 'Daniel St.Cyr', with a long horizontal line extending to the right.

DS  
February 5, 2004



**Notice of References Cited**Application/Control No.  
10/030,163Applicant(s)/Patent Under  
Reexamination  
MODL ET AL.Examiner  
Daniel St.CyrArt Unit  
2876

Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-5,982,914	11-1999	Lee et al.	382/124
	B	US-6,554,705	04-2003	Cumbers, Blake	463/29
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.